THE BRITISH ASSOCIATION.

VISIT TO MANCHESTER, 1861.

The occurrence of the most notable local event for many years, induces us to deviate from our usual course by this week devoting the whole of our Supplement to a record of some at least of the transactions of the British Association for the Advancement of Science, whose annual meeting is now being so successfully celebrated in our midst. A brief account of the previous career of the Association, by way

of a preface, may not be out of place. The British Association has acquired a great reputation, and has held annual meetings in the principal towns of the United Kingdom for the last thirty years, with everamong whom Sir David Browster was prominent, determined to meet at York, as at a central rallying place. There they received the effective co-operation of the Local Professor Phillips, who has ever since taken the most active position in the Association. In devising a constitution for this now society, which was to resuscitate British science, | they enjoyed the advantage of some previous experience in Germany. In 1823 the illustrious Oken had first carried out a local meeting of scientific men at Leipzig. The numbers present, at first about a score, had increased most encouragingly in succeeding years, and royalty had patronised the new association. Suffice it to say, that the constitution adopted, on the German model, at the York meeting, has proved most admirably effective. It was arranged that the Association should meet once a year, and each time in a different town. In this manner, fresh local energy and liberality would each year be called forth; a fresh portion of the enlightened population of this island would be brought by the influence of the Association the better to appreciate the utility and majesty of science. Thus, also, the regular permanent members of the Association would be attracted to each meeting by the desire of visiting the local curiosities of the new town in which it is held. The first York meeting was held in 1831. At its conclu-

sion Dr. Daubeny invited the Association to meet next time in Oxford, and the event came off in that venerable seat of learning with the greatest success. Shortly it became the custom for the towns of the kingdom to compete sharply, through the agency of their chief scientific men or societies, for the honour of the next visit of the Association. The town having been named by the committee of the Association, a local committee of the chief scientific townspeople is appointed, who mise a sum of money by subscription in the town to defray the expenses of the lecture rooms and other necessary preparations. It is a condition that the sum thus raised, or guaranteed, be not less than £1,000. In latter years the sum guaranteed has often vastly exceeded the minimum, and in the present, or second Manchester visit, it amounts, we understand, to ten times the minimum. Thus the Association each year finds itself received with honour and hospitality, and it is enabled to devote the whole sum of money collected in subscription fees from its own members to the direct prosecution of

scientific researches.

The Association undertakes impartially the encouragement of the whole sphere of the exact or physical sciences. But their extent is almost infinite; honce the members of the Association divide themselves for the strict scientific tusiness of the meeting into eight sections or open committees, devoted respectively to mathematics and physical ecience, chemical science, goology, zoology and botany, physiology, geography and ethnology, economic science, and statistics, mechanical science. La each section all scientitic communications exhibiting any originality or ability, and pertaining to its own brauch of science, aro eccived, read, and discussed as fully as time will allow. Apart from the benefit which the audience receive, the full and wholesome publicity thus ensured to any research is a great incentive to exertion in all who are capable of scientific investigation. Thus has the Association, in each of its thirty meetings, placed upon record some 150, 200, or even 250 original scientific papers.

But the influence of the Association does not end here. It divides all available funds in sums, generally not exceeding £20 or £30, each of which is granted to some scientific inquirer to facilitate his acquisition of suitable apparatus. Adding up the total grants thus made to the end of the year 1855, we are surprised to find them amount to £15,000. Never was a sum of money raised from such unexceptionable sources; never was it expended for such beneficial purposes. For £20, an inconsiderable fraction of what a gentleman may spend on his racehorse or his wine, a scientific discovery is often ensured which may add millions to the national wealth; which inevitably does contribute to the vast general progress of knowledge and production.

The annual publications of the Association are also of much importance, and their chief fault is the very uncommon one of extreme curtailment. The scientific reports, indeed, are given at length, but of the papers short abstracts only are usually printed. Now, abstracts of scientific papers are generally almost useless to succeedlog students; for assertions and theories, without the detailed observations and numerical data upon which they stand, are like persons without testimonials. We should desire, then, to see the better part of the communications to the Association printed in full, manuscript copies of the remainder being deposited in some library (for instance, that of the British Museum or the Royal Society), with mere reference lists in the printed reports. In combination with the complete reference lists of all scientific papers published in all countries, which the Association has lately undertaken, its works would then have almost unrivalled value for the investigator. Many long-continued researches of the highest value have also been carried out under the auspices of the Association. Such are those on the "Tides," by Dr. Whewell; on "Waves," by Mr. Scott Russell; on the "Vitality of Seeds," by Dr. Daubeny; on "Earthquakes," by Mr. Mallet, on the strength of materials, &c. The seas have been dredged in search of the multitudinous forms of animal life; the higher regions of the atmosphere have been explored by four costly balloon voyages, and many esservations performed at heights up to 22,000 feet, with an accuracy never before approached, all by the agency of street. the Association. In addition, the Kew Observatory has been established and maintained; but to describe what has been there performed would quite surpass our limits. The Association has acquired great skill in the local

arrangements for the convenience and satisfaction of its thousands of members and visitors. Lodgings, refreshments, reading-rooms, exhibitions, excursions, soirées, music, lectures, railway facilities, are all carefully provided. In the present visit, indeed, we hear that the Association, through the zealous exertions of its secretaries tainly the arrangements as detailed in the advertised programme have an astonishing completeness, and the War Office might envy the mode in which the quartermaster's and commissariat departments are performed, and the most extensive and difficult manoruvres managed.

The British Association, then, seems almost to have aspired to the position of a parliament of physical science. Many of our readers will be able to judge, during the progress of this meeting, how far it fulfils its self-assumed Gaties. We have so strong a faith in individual British reality and energy, that we are not likely to exaggerate its importance. It is doubtless true that any association of this research and improvement, which only a powerful society; of telegraphic apparatus, &c., during the time that the about £200.

THE MANCHESTER MEETING. PROGRAMME OF PROCEEDINGS.

Philosophical Society, of the Archbishop of York, and of 2 worsted mills, 16 smallware mills, 5 printworks, 37 dysworkshops, 7,840 shops, and 1,758 warehouses. Some of the from amongst us; and a slight idea of the progress which Manchester is making may be gleaned from the fact that between September, 1859, and September, 1860, 372 buildwithin the city. Since the Society was last here, too, our Exchange has been rebuilt at a cost of about £30,000; our have established a Free Library supported by a local rate; parks have been provided for the recreation of the people; and immense water-works have been constructed to supply the city with pure water, at a cost of something like a million and a half of money.

It may be an interesting fact to the lovers of science to state that no less than about 400 papers will be read before the various sections during the visit of the society to Mau-

ESTABLISHMENTS OPEN TO VISITORS. Arrangements have been made to enable the members of the Association to visit works and manufactories of various descriptions during their sojourn here. In all cases except those marked with an asterisk, the production of the Association ticket will secure admission. For the excepted places tickets may be obtained from the local secretaries. The programme issued by the committee contains a statement of the time during which each may be visited. The following is a list of the works, &c.:-

MACHINISTS, &c.-William Fairbairn and Son, locomotive and stationary engines, &c., Canal-street, Ancoats; J Hetherington and Son, tools and cotton machinery, Pollard-street, Ancoats; Platt Brothers and Co., cotton machinery, Oldham; *Dobson and Barlow, general, Bolton; Wren, Wren, and Hopkinson, general, 47, Altrincham-street, London Road; Peel, Williams, and Peel, general, Pollardstreet, Ancoats; Musgrave and Sons, general, Bolton Beyer, Peacock, and Co., locomotive and other engines, Gorton; *Sharp, Stewart, and Co., locomotive and other engines, Great Bridgewater-street, Oxford Road; John Ashbury, railway carriages and wagons, Gorton; J. Whitworth and Co., tools and engines, Chorlton street; Francis Preston, bayonet and rifle cutting machines, Ancoats Bridge Works, Limekiln Lane, Ardwick; Gadd and Hill, calico printing machines, Regent Road, Salford; Joseph Lockett, Sons, and Leake, engraving for calico printers, Moultonstreet, Strangeways; *Broughton Copper Co., copper rollers for calico printers, Broughton Road, Salford; W. and J. Galloway, engines, boilers, &c., Knott Mill; Richard Johnson and Brothers, wire, &c., Bradford, near Manchester; Richmond and Chandler, agricultural machines, Millerstreet, Salford; Jas. Nasmyth and Co., engines, &c., Patricroft; Charles de Bergue and Co., engines and bridges, Mary-street, Strangeways; Edmondson and Son, railway tickets by patent machinery, Cotham-street, Great Duciestreet, Straugeways; J. M. Bennett, sawing and wood moulding, Hyde Road, Ardwick; William Muir and Co. machines and tools, Sherborne-street, Strangeways; William Horsfall, patent cards for spinners; John and Edward Wood, engines, &c. Victoria Foundry, Bolton.

TEXTILE MANUFACTURES. - Joseph Thompson, cotton weaving, Sandy Nook, and Pin Mills, Ardwick; E. Armitage and Sons, cotton spinning and weaving, Ford Lane, Pendleton; James Holdsworth and Co., silk manufacturers, Blackley; James Holdsworth and Co., warehouse, 23, Port-

Dean Mills, Halliwell, near Bolton.

Peter Spence, alum, Holland-street, Butler-street, Newton Heath; Crossfield Brothers and Co., soda, St. Helens; Thomas Vickers, bono and size manure, Vickers-street, Miles Platting; C. Scholesield, vitrlol and alkali, Clayton; John Metcalf and Co., acids, Vickers-street, Miles Platting; W. Gossago and Sons, soap and silicates, Widness Docks, St. Helens; Crossfield and Sons, soap, Warrington; Molineaux, Webb, Ellis, and Co., flint glass, Kirby-street, Canal-street, Ancoats; Gaskell, Deacon, and Co., soda ash ash and chloride of lime. Prestolee; Manchester Gas Works, Gaythorn.

Rhodes, near Middleton.

SWIFT NEWSPAPER PRINTING.—Alexander Ireland and

PUBLIC INSTITUTIONS.

The newsrooms of the Exchange; the Portico, Mosleystreet; the Athenaum, Bond-street; and the Mechanics' Institution, David-street, are open to members and associates. So also are the gardens of the Betanical and Horticultural Society, Old Trafford; Museum of Natural History, Peter-street; Royal Salford Museum Peel Park, Salford; Chetham's Hospital and Library, Hunt's Bank; Manchester Free Libraries, Camp Field, Stretford New Road, and Rochdale Road; Lancasterian and various committees, has quite surpassed itself. Cer. School, Marshall-street, Oldham Road; Ragged and Industrial Schools, Ardwick Green; Model Secular School, Deansgate; Royal Infirmary, Piccadilly; Royal Lunatic Hospital, Cheadle; Henshaw's Blind Asylum, Old Trafford; Manchester Workhouse, New Bridge-street, Strangeways; Manchester New Workhouse, Crumpsall; Manchester Moral and Industrial Training Schools, Swinton, near Worsley; Museum Cotton Supply Association, Newall's Buildings.

SOIREES AND EXHIBITIONS.

can attempt. It does all without incurring the jealousy, most scientific and learned men might be assembled in this | THE CHEMICAL SECTION.—In connection with this secare and inevitable conflict, which attends government intercity. The idea was so favourably received that he was tion there is an exhibition of chemical products in the encouraged to bring it before the local committee of the laboratory of Owens College, adjoining the theatre. It is Royal Infirmary enlarged to three times its original size; the | able attention, from the exquisite minuteness with which | Old Free-trade Hall has given place to one of the most they are finished. The Magnetic Telegraph Company handsome architectural embellishments of Manchester; we | will work to Liverpool, Glasgow, Dublin, and London, direct, with Highton's single needlo telegraph, and Bright's bell telegraph; and will also place wires at the disposal of the Submarine Telegraph Company, who have not yet decided to what places on the continent they will communicate; but the French government have accorded to them the use of the French lines during the evening. The Magnetic Telegraph Company will also work Henley's new electrie dial instrument to Liverpool, if it arrives in time; and ted at the pleasure of the assembled guests. The "Globe" telegraph, recently patented by Mr. Wild, of Manof attention.

the exhibition (as one intended to show the progress of telegraphy) would be incomplete.

Mr. Brett contributes the "first printing telegraph," and

to be easily recognised without reference to the programme. The trustees of the late Mr. Edw. Highton have consented to lend some of his early inventions, as the gold-leaf will embrace the opportunity of bringing forward his automatic telegraph, double needle, spoke commutator, universal telegraph, a means of communicating between guard and driver, and several specimens of submarine cables. The Gutta Percha Company, Messrs. Silver and Co., Hall and Wells, and Mr. Henley, will be fully represented, chiefly, if not entirely, in specimens of subterranean and submarine cables, and their contributions will, no doubt, be of more than ordinary interest in connection with the race for preeminence between gutta percha and caoutchoue. Professor Thotason's marine galvanometer; Rowland's submarine cables; a most valuable arrival from Messrs. Siemens, and some portraits from Mr. Robert Dodwell's collection of—shall we say?—telegraphic celebrities, will complete the list of English contributors. Sir Charles sea soundings, and calcareous deposits on cables. From the continent we are to have Breguet's apparatus and what he terms a "Freuch Morse." In these inventions will be found the connecting link between the electric telegraph and the old semaphore. Faber sends a table full of insulators, "too numerous to mention."

EXHIBITION OF PHOTOGRAPHS.—This exhibition, got up by the Manchester Photographic Society, opened on Thursday morning, in one of the large rooms of the Exchange. Members of the Association are admitted on showing their tickets, and the public at a small charge. The exhibition has been arranged so as to show the progress of the art from its commencement up to the present time. land-street; Thomas Bazley, fine cotton and lace thread | The greater portion of the specimens exhibited have spinning, New Bridge Mills, Water-street, Manchester, and | been contributed by members of the Manchester Photographic Society, and others have been kindly fur-CHEMICAL WORKS.—Crook and M'Kinnon, prussiate of | nished by eminent photographers in various parts of the potash, Ashton New Road, Bradford, near Manchester; | country. On entering the room, the attention of the visitor is first arrested by an interesting series of calotypes, or portraits executed by the first method of photography, invented by Talbot. This series was executed between the years 1841 and 1845, by Mr. D. O. Hill, R.S.A., Edinburgh, and the late Dr. Robert Adamson. Sir Charles Eastlake and Dr. Waagen have prenounce these portraits to be the finest they have seen executed by the photographic art. Under these portraits are three of the most modern specimens of photography, also executed and crystal, caustic soda, bicarbonate of soda, and bleaching | by Mr. D. O. Hill. There is a fine series of the Royal powder, Widness Docks, St. Helens; Edward Wilson, soda | Family, executed by Mayall, of London, who also exhibits portraits of Lord Derby, Earl Russell, Lord Brougham, and Lord Lyndhurst. There is a large photograph of the officers CALICO PRINTING.—Thomas Hoyle and Sons, Mayfield, of the 84th Regiment, executed by Mr. Brothers, of St. Buxton-street, London Road; Edmund Potter and Co., | Ann's Square, There are some photographs of landscapes, Dinting Vale, near Glossop; Salis Schwabe and Co., | done by the wax paper process, which was invented by M. Le Gray, of Paris, in 1851. Two of these, by Mr. Sidebotham, are very fine. Amongst the specimens of the Co., proprietors of the Manchester Examiner and Times, | collodion process are two by Wilson, of Aberdeen; where there will be shown at work Hos and Co.'s ten cylin- | several by Vernon Heath, of London; and one which calls der rotary printing machine, capable of printing 20,000 im- for particular notice is "Aberfoyle," by Annan, of Glasgow. pressions per hour. This machine will be exhibited at full | A print, taken by Professor Way's electric light from a work on the evenings of Friday the 6th and Monday the 9th | negative by Francis Bedford, of London, is a novelty September, commencing at half-past ten o'clock each night. | which will no doubt attract much attention. There WAREHOUSES.—S. and J. Watts, Portland-street; J. is a number of landscapes exhibited, taken by Mr. Pender and Co., Mount-street, Peter-street; J. and N. Roger Fenton, who, it will be remembered, went to Philips and Co., Church-street; Sam Mendel, Portland- | the Crimea during the war, and brought home an interesting series of photographs with him. The South Kensington Museum has contributed copies of two of the cartoons, and a number of copies of drawings by the old masters. Mr. Petscheler exhibits a number of landscapes. taken by a modification of the collodio-albumen process. discovered by himself and Mr. Mann last year. Mr. S. Cottam exhibits a series of stereoscopic views, which he calls "Holiday Rambles." An excelient series of views from Edinburgh and the neighbourhood, taken by Mr. W. D. Clark, by the collodio-albumen process, will well repay careful inspection. Perhaps the most interesting photograph in the exhibition is "The Lady of Shalott," printed from a number of negatives by Mr. H. P. Robinson, of Leamington. It is illustrative of the following lines, from Tennyson's poem:

Down she came and found a boat, Below the willow lept affoat.
And round about the prow she wrote,
"The Lady of Shalott."

an exceedingly interesting description. For it, we believe, the of Manchester. A series of photographs are shown, enexcellence; these show themselves spontaneously, and as it was decided that the British Association would ment in Vienna. There is a series of 30 photographs from conquer opposing obstacles. But the Association excites hold their annual meeting in Manchester, Mr. Dodwel- the drawings contained in Turner's "Liber Studiorium," never otherwise undertake. It organises schemes of fession as to the desirability of promoting an exhibition from which these photographs are taken are said to be worth | cobs or loom-made fabrics of silk, gold, and silver; and the

association. The proposition was cordially approved of by open daily during the sitting of the Association, to members the local committee of the association, and the result is that of the Association only. The collection has been arwe shall have a soirée and exhibition as novel as interesting. ranged under the superintendence of Dr. Roscoe and The first visit of the Association to Manchester was in | The Electric and Magnetic Telegraph Companies have ex- Mr. Charles O'Neill. The arrangement of the speci-1842, and since that time our city may be said to have | tended a cable, of sixteen or twenty wires, from their offices | mens has been made with a view to show the process of kept pace with the progress of science and the ad- in the town to the Free-trade Hall, for the purpose of the manufacture of the various chemicals, and the manner vancement of the age in which we live. We freely con- working different instruments direct to distant places. in which they are adapted for commercial purposes. Thus fess that we have not much to boast of in the way of Thus the Electric Telegraph Company will connect Mr. Spence, of Newton Heath, contributes a very fine block architectural achievements, if we except some of our Cooke and Wheatstone's telegraph, Baines's printing of crystallised alum, together with the substances from which magnificent warehouses, which are amongst the finest telegraph, and Morse's embossing telegraph with London, it is obtained, namely—shale from the coal measures, buildings in the city. We cannot point, as the Parislans Derby, Glasgow, Aberdeen, and (vid the Hague) with Berlin | Spanish pyrites, and ammonia from gasworks. Messrs. can, to a Madeleiue as the most perfect specimen of Greek and Hamburg, and (very likely) St. Petersburg or Tagan. | Crook and M'Kinnon, manufacturing chemists, Manchester, architecture in the world, neither have we a St. Paul's | rog; for, by the system of relays, now so universal on the exhibit a splendid crystallised block of ferrocyanide of United Kingdom for the fine what after this Cathedral, as an illustration of the perfection of the continent, no distance seems too great for this medium potassium, of a beautiful dark yellow colour. This is, perincreasing success. It originated somewhat after this Cathedral, as an illustration of the perfection of t increasing success. It of scientific men, at at of perspective. Manchester is far more distin- of direct communication. There will be exhibited Var- haps, the gem of the collection. Some red and yellow fashion. Some years ago, a number was prominent, deterguished for the practical than the ornamental, as will be ley's various patents; Preece's apparatus for sending chromates of potash, in the crystallised state, are exhibited seen when we state that out of the 71,956 buildings of all messages "both ways at once" on the same wire; Varley's by Messra. Dentith and Co., manufacturing chemists, Mankinds within the city, we have 95 cotton mills, 13 silk mills, | lightning conductor; and, what will no doubt prove of the | chester, who also show the chrome ores from which they are greatest interest, a considerable number (they fill six large | manufactured. The same firm also contributes some ferriworks, 63 machinists' shops 48 foundries, 1,128 miscellaneous | cases) of instruments, bougat up, from time to time, by the | cyanide of potassium, nitrate of lead, chloride of ammonia, Electric Telegraph Company, when first they opened to the and sulphate of copper. Numerous specimens illustrating the places in which the sections met in 1842 have disappeared | public, in order to ensure them against competition, and | process of the alkali manufacture are furnished by Messra. which may be said never to have done any public service. Hutchinson and Earle, alkali manufacturers, Widness Another contributor, also in this company's service-Mr. | Dock, near Warrington. Amongst them are some magni-Lister—sends papier-maché models of the electric telegraph, | ficent crystals of bicarbonate and carbonate of soda. Messrs. ings of various descriptions have been erected and completed | Baines's printing telegraph, and Bright's bell telegraph, with | Gaskell, Deacon, and Co., of Woodend Chemical Works, manipulating keys and batteries, complete. These have been | Widnes Dock, near Warrington, also contribute pseudofinished with great care, and will, no doubt, receive consider- morphous crystals or bicarbonate of soda, together with refined soda ash or alkali, and commercial anhydrous carbonate of soda; also some beautiful crystals of decahydrated monocarbonate of soda, producing bicarbonate of socia; besides specimens of bleaching powder, composed of dressed lime, hydrochloric acid, and Spanish manganese, each of these component parts being also shown separately. Several blocks of rock salt are sent by Messrs. Fletcher and Rigby, together with specimens of steam. made Cheshire salt, in its various stages of manufacture. Some fine crystals of chlorate of potash are exhibited by Mr. F. Muspratt, of Woodend Scda Works; whilst Mr. on all these distant lines messages will be freely transmit. B. W. Gerland, of Widnes Dock, sends some specimens of chloride of manganese and peroxide of manganese. Passing to the next division of the room, the visitors will observe chester, which is easy to work and read, will be exhi- a very large glass retort above the shelves. It is used bited at the soirée, and no doubt it will be a special object | as a retort for sulphuric acid. Messrs. Roberts, Dale, and Co., of Combrook, Manchester, have a nume-Professor Wheatstone will send his carliest inventions to | rous and interesting collection. First, there are samcompare with his latest patents, and no more interesting | ples of colours, manufactured at their works; next, specimens could be exhibited than these, the first tele- | materials illustrating the process of the manufacture of graphs known in Great Britain. Indeed, without them, oxalic acid from sawdust; then some beautiful crystals of hyposulphate of soda or antichlore. Also some new aniline colours, with dyed specimens of wool showing their quality. These colours comprise the mauve, magenta, and many various specimens of submarine cables, all endorsed, so as others, and have all been obtained from aniline, a production from coal tar, by the patented process of Mr. J. Dale and Mr. Heinrich Caro. Besides these, Messrs. Roberte, Dale, and Co., have sent numerous samples of chemicals in telegraph, the revolving pointer, and others; and Mr. Allan | general use amongst dyers and calico printers. An interesting collection of soap and soluble glass is exhibited under a glass case by Messrs. William Gossage and Sons, patentees and manufacturers, Widnes Dock. The soap contains a solution of silicate of soda combined with the ordinary materials used in the manufacture of soap. The soluble glass is made from two substances, exhibited in their pure state, namely, pure silica, in the form of white sand from the Isle of Wight, and dry carbonate of soda, in the form of soda ash. Messrs. Tennant and Co., of Manchester, have sent several specimens of copper and other salts used principally for dyeing purposes; also specimens of chloride of copper. Mr. J. Carsartelli, Manchester, contributes several products from the distillation of gas tar, including naphtha, ammonia, muriate of ammonia, and pitch. Some British gums and gum substi-Bright will send some microscopic specimens of deep tutes used in calico printing are exhibited by Mr. James Laing, George-street, Manchester. Specimens of the same description have also been sent by Messrs. James Higgin and Company, Manchester, besides stannate of soda and arseniate of soda. Messrs. Thomas Hoyle and Sons have sent a quantity of dye woods, their extracts, and mordants, and a quantity of calico prints to show the application of the different dyes. A number of the pieces of print show the colours which are obtained from madder and garancine. The same firm have also supplied several pieces of muslin delaine, which show the different stages of the manufacture up to the printing and finishing. In addition, there is a card containing specimens of lilacprinted calico, showing the fourteen stages of dyeing purple with madder. Messra. Pincoffs and Co., of Manchester, have furnished samples of madder, garancine, commercial alizarine, and other dyes. The Seedley Printing Company have sent a case illustrating the process of dyeing with madder and garancine. A very interesting collection of the chemical principles contained in madder, is exhibited by Dr. Schunck. F.R.S., by whom each specimen has been carefully prepared and examined. This case, we are told, is quite unique. Specimens of dye stuffs and woods are also shown by Messrs. George Whyatt and Son, of Openshaw, including logwood (in bulk and ground), peachwood (in bulk and ground), fustic, sapanwood, Limawood, indigo, safflower, cudbear, annotta, picric acid, &c., together with silk velvets, showing the different colours obtained from these dyes. The same firm exhibits some colours derived from aniline, and also velvets dyed with them. Specimens of dyewoods, along with their solid and liquid extracts, are furnished also by Messrs. Hervey, Peak, and Hervey, of Salford. Messrs. J. and J. M. Worrall and Co. have also sent velvets, dyed with the following substances, which they also exhibit:—Young fustic, barwood, catechu, ebonywood chips, divi divi, and turmeric. Messrs. Roberts, Dale, and Co., Cornbrook, show a block of barwood, rough and polished. Messrs. J. and T. Johnson, Salford, exhibit several specimens of resin, showing the different stages of the process of purifying common resin by the patented process of Messrs. Hunt and H. D. Pochin. By this process very dark resin is made perfectly transparent, and almost colourless, and can then be very extensively used in soap and other manufactures. The same firm exhibit specimens of resin spirit and oil, which, we are told, are rather rare productions from resin. Mr. James Woolley, chemist, of Market street, supplies a number of interesting pharmaceutical preparations. From an establishment at St. Helens come some beautiful crystals of chlorate of potash, which reflect the light in so peculiar a manner as to exhibit all sorts of colours; also, from the same place, some beautiful specimens of nitrate of soda. Messrs. Edmd. Buckley & Co., cf Manchester, supply specimens in illustration of the manufacture of sulphate of iron, or green copper. Messrs. Evans and M'Bryde, of St. Helens, furnish specimens to illustrate the manufacture of copper from different kinds of ore; also some refined caustic soda, and refined soda ash. Dr. P. Pauli, of St. Helens, exhibits a remarkable specimen of graphite obtained during the preparation of caustic soda and derived from the decomposition of the cyanides. ARTICLES FROM THE INDIA MUSEUM. - The Secretary of State for India has contributed a number of articles from the India Museum, Fife House, Whits-

hall, in illustration of the cotton manufactures and embroidery work in muslin cloth, silk, and velvet. Amongst the The photograph has been taken from nature, and is not a exemples of cotton manufacture will be calicoes dyed and copy of a picture. Some of Mr. Mudd's best specimens are | coloured, damasks, printing in gold and silver, articles of THE TELEGRAPH Source.—This soirée, which will take to be seen in the exhibition, and there is in the room a col- male and female attire called loongees, sarees, &c. The place in the Free-trade Hall on Saturday evening, will be of | lection of Egyptian scenes, photographed by Mr. Buxton, | second class will consist of examples of plain and embroidered muslins; the third will comprise examples of embroipublic will be indebted almost exclusively to Mr. R. graved by chemical means entirely, by Paul Pretsch, who dery on muslin, &c., with gold, silver, and tinsel; the kind is incapable of calling forth the highest degrees of Dodwoll, of the Magnetic Telegraph Company. As soon | was formerly the director of the Royal Printing Establish- | fourth, examples of embroidery in cloth, silk, and velvet; the fifth, true cashmere shawl and scarfs; the sixth, examples of cashmere shawls and scarfs embroidered in loom many men of great ability to exertions which they would consulted some leading members of the electrical pro- published by Messra. Cundall and Downes. The engravings frames at Delhi and Dacca; the seventh, examples of kineighth and last class will contain examples of silk pieces